

Listing of Claims:

Claims 1-10 (Canceled).

11. (Previously Presented) An apparatus for controlling a hydraulic pump for a working machine of a working vehicle having a cylinder arrangement for operating the working machine, a variable displacement hydraulic pump for supplying oil at a specified pressure to said cylinder arrangement, a control valve for controlling a flow rate of oil supplied to predetermined cylinders in said cylinder arrangement and a working machine operating lever, comprising:

10 a bottom pressure detector for detecting a hydraulic pressure in a bottom side of at least one cylinder of said predetermined cylinders in said cylinder arrangement;

15 a displacement control device for controlling a displacement of said variable displacement hydraulic pump so that a load sensing differential pressure that is differential pressure of a load pressure of said predetermined cylinders and a discharge pressure of said variable displacement hydraulic pump becomes constant; and

20 a controller which inputs therein a detection value from said bottom pressure detector, determines that an excavating operation starts when a predetermined time elapses with said detection value

at a predetermined value or less and thereafter, said detection value exceeds a predetermined value, and reduces a stroke of said control valve for a maximum stroke of said working machine operating lever to be a smaller predetermined stroke than a maximum
25 stroke.

12. (New) The apparatus for controlling the hydraulic pump for the working machine of the working vehicle according to claim 11, wherein said controller inputs therein a detection signal from an operation position detecting means for detecting 5 an operation position of a forward and reverse travel operating unit of said working vehicle, and stops transmission of said displacement control signal to said displacement control device when the operation position is switched to a neutral or reverse travel position from a forward travel position.

13. (New) The apparatus for controlling the hydraulic pump for the working machine of the working vehicle according to claim 11, wherein said controller determines that the excavating operation is finished when said detection value from said bottom 5 pressure detector becomes the predetermined value or less within a first set time previously set, after determining that the excavating operation starts, and stops transmission of said displacement control signal to said displacement control device.

14. (New) The apparatus for controlling the hydraulic pump for the working machine of the working vehicle according to claim 11, wherein said controller determines that the excavating operation is finished when said detection value from said bottom pressure detector becomes the predetermined value or less, after determining that the excavating operation starts, and a state at the predetermined value or less continues for more than a second set time previously set, and stops transmission of said displacement control signal to said displacement control device.

15. (New) The apparatus for controlling the hydraulic pump for the working machine of the working vehicle according to claim 11, further comprising:

a bucket height detector for detecting a height of a bucket of said working machine,

wherein said controller inputs therein said bucket height from said bucket height detector after determining that the excavating operation starts, and determines that the excavating operation is finished when said bucket height becomes a predetermined value or more, and stops transmission of said displacement control signal to said displacement control device.

16. (New) The apparatus for controlling the hydraulic pump for the working machine of the working vehicle according to claim 11, wherein said controller is arranged to measure a duration of time when said detection value is at the predetermined value or less.

17. (New) The apparatus for controlling the hydraulic pump for the working machine of the working vehicle according to claim 11, wherein said controller is further arranged to output a displacement control signal for reducing the displacement of said variable displacement hydraulic pump to a predetermined displacement that is smaller than a maximum displacement of said variable displacement hydraulic pump to said displacement control device after said controller determines that the excavating operation has started.

18. (New) A method for controlling a hydraulic pump of a working machine of a working vehicle having a cylinder arrangement for operating the working machine, a variable displacement hydraulic pump for supplying oil at a specified pressure to said cylinder arrangement, a control valve for controlling a flow rate of oil supplied to predetermined

cylinders in said cylinder arrangement and a working machine operating lever, said method comprising:

10 detecting a hydraulic pressure in a bottom side of at least one cylinder of said predetermined cylinders in said cylinder arrangement;

15 controlling a displacement of said variable displacement hydraulic pump so that a load sensing differential pressure that is differential pressure of a load pressure of said predetermined cylinders and a discharge pressure of said variable displacement hydraulic pump becomes constant;

20 determining that an excavating operation starts when a predetermined time elapses with said detection value at a predetermined value or less and thereafter, said detection value exceeds a predetermined value; and then

reducing a stroke of said control valve for a maximum stroke of said working machine operating lever to be a smaller predetermined stroke than a maximum stroke.

19. (New) The method for controlling a hydraulic pump of a working machine of a working vehicle according to claim 18, further comprising:

5 determining that the excavating operation is finished when a forward and reverse travel operating unit of said working vehicle is switched to a neutral or reverse travel position from a

forward travel position, after determining that the excavating operation starts; and then

10 stopping control to reduce the stroke of said control valve to the smaller predetermined amount.

20. (New) The method for controlling a hydraulic pump for a working machine of a working vehicle according to claim 18, further comprising:

determining that the excavating operation is finished when 5 the hydraulic pressure in said bottom side becomes the predetermined value or less within a first set time previously set, after determining that the excavating operation starts; and then

stopping control to reduce the stroke of said control valve 10 to the smaller predetermined amount.

21. (New) The method for controlling a hydraulic pump for a working machine of a working vehicle according to claim 18, further comprising:

determining that the excavating operation is finished when 5 the hydraulic pressure in said bottom side becomes the predetermined value or less, after determining that the excavating operation starts, and a hydraulic pressure state of

the predetermined value or less continues for more than a second set time previously set; and then

10 stopping control to reduce the stroke of said control valve to the smaller predetermined amount.

22. (New) The method for controlling a hydraulic pump for a working machine of a working vehicle according to claim 18, further comprising:

determining that the excavating operation is finished when a 5 height of a bucket of said working machine becomes a predetermined value or more, after determining that the excavating operation starts; and then

stopping control to reduce the stroke of said control valve to the smaller predetermined amount.

23. (New) The method for controlling the hydraulic pump for the working machine of a working vehicle according to claim 18, further comprising:

measuring a duration of time of a state in which said 5 hydraulic pressure in said bottom side is at the predetermined value or less.